

SPRING-SUMMER 1984

INTERNATIONAL  
JOURNAL  
OF  
MENTAL HEALTH

***Unemployment, Mental Health,  
and Social Policy***

Guest Editors: PAULA RAYMAN  
AND RAMSAY LIEM

**UNEMPLOYMENT, MENTAL HEALTH,  
AND SOCIAL POLICY**

Guest Editors: PAULA RAYMAN AND RAMSAY LIEM

**Perspectives on Unemployment, Mental Health,  
and Social Policy**

RAMSAY LIEM AND PAULA RAYMAN

3

**Unemployment Research in Europe**

**The Psychological, Social, and Biochemical  
Impacts of Unemployment in Sweden:  
Description of a Research Project**

LENNART LEVI, STEN-OLOF BRENNER, ELLEN M. HALL,  
ROBERT HJELM, HEIKKI SALOVAARA,  
BENGT ARNETZ, AND INGA-LILL PETTERSSON

18

**Unemployment and Mental Health: Perspectives  
from the Federal Republic of Germany**

DETLEF SCHWEFEL, JÜRGEN JOHN,  
PETER POTTHOFF, AND ANNEROSE HECHLER

35

**Unemployment, Attribution Theory, and  
Mental Health: A Review of the British  
Literature**

ADRIAN FURNHAM

51

**Differentiating the Unemployed**

**A Discouragement-centered Approach to Studying  
Unemployment among Black Youth: Hopelessness,  
Attributions, and Psychological Distress**

PHILLIP J. BOWMAN

68

## UNEMPLOYMENT AND MENTAL HEALTH: PERSPECTIVES FROM THE FEDERAL REPUBLIC OF GERMANY

DETLEF SCHWEFEL, JÜRGEN JOHN,  
PETER POTTHOFF, and ANNEROSE HECHLER

The problem of unemployment in the Federal Republic of Germany (FRG) since World War II can be divided into three phases. The first, lasting until the mid-fifties, involved a high but rapidly decreasing rate of unemployment. The second, which reached into the seventies, brought rapid economic growth and almost permanent full employment, the only interruption being a short-term recession in 1967. The third, which began in about 1974, is characterized by increasing cyclical and structural problems and a continuing crisis in the labor market, which is still worsening. Not surprisingly, unemployment did not become a topic of theoretical and empirical social research in the Federal Republic of Germany until the mid-seventies.

### **A review of the relevant literature**

Since the mid-1970s, empirical research has focused on problems such as the careers of the unemployed through various stages, their chances of reintegration into the labor force, and early retirement, but also—though quite rarely—on the mental health impacts of unemployment. We shall briefly summarize some of the more important studies of the influence of unemployment on health,

---

The authors are associated with the Gesellschaft für Strahlen- und Umweltforschung GmbH (GSF), Institut für Medizinische Informatik und Systemforschung (MEDIS), Ingolstädter Landstrasse 1, D8042 Oberschleissheim, Federal Republic of Germany.

specifically, mental health; most of these studies have in common their use of structured interviews.

Hentschel, Möller, & Pintar [1] found fatalistic attitudes to be markedly more common among the unemployed, particularly the long-term unemployed, than in employed controls. Furthermore the employed controls tended to "blame the victims," to put the blame for their unemployment on the unemployed themselves.

Studies by Büchtemann and co-workers [2-4] revealed an increase in psychophysical complaints and in "expectation of failure/self-blame," but a decrease in "anxiety in social situations" among the long-term unemployed. Brinkmann [5,6] found that the financial strains involved in unemployment did influence psychosocial health, as did the availability of socially and financially acceptable alternative roles, sex, and marital status, but that the duration of unemployment was not a significant factor.

Other studies in the FRG have focused on the reactions of certain occupational and sociodemographic groups, such as women and young people, to unemployment [7-9]. Mohr & Frese [10] and Frese [11], in a small-cohort study of workers who had been unemployed, detected more depression in those who were still, or again, unemployed than among workers who had, in the meantime, retired.

Frölich [12] investigated the role of economic deprivation and work orientation in influencing the impact of unemployment on physical and mental health and social well-being and found feelings of anomie to be relatively closely related to work orientation. This suggests that the mental health effects of unemployment may be quite dependent on personality and attitudes.

### **Micro and macro approaches to analyzing the health effects of unemployment**

In analyzing the association between unemployment and mental health, researchers in the FRG have used mainly interviews with unemployed workers and with control groups rather than other methods, in spite of the availability of at least two alternative approaches in international use:

—study designs, based on an econometric method, that refer to populations as units of analysis: the aggregate-data or macro approach, and

—biometric or psychometric study designs with individuals as units of analysis: the individual-level or micro approach.

We have tried to use both approaches in our study of unemployment and mental health, for reasons that are discussed below.

### *The micro approach*

A recent (and continuing) study of the influence of unemployment on health, a cross-sectional comparison of a sample of unemployed workers with a control group of some still employed workers, and, subsequently, a follow-up of the unemployed group have been conducted by the Institute for Labor Market and Occupations Research of the German Federal Labor Office, in cooperation with the Institute for Medical Informatics and Health Services Research (MEDIS) [13]. In this study, the general relationship between unemployment and health is viewed as an intervening factor of the unemployed's chances of becoming reintegrated into the labor force.

The authors see three possible relationships among unemployment, health, mental health, and the chance of reintegration:

1. Bad health may "select" people to be fired from their jobs.
2. Bad health may be a negative selective factor for the chance of becoming reintegrated into the labor force.
3. Unemployment may have direct, deleterious effects on (mental) health.

For analytical purposes, these three functional relationships should be separated, although there is undoubtedly interaction among them.

*The study design.* The cohort study by Brinkmann & Potthoff [13] was conducted on the basis of a representative random sample of people who, in 1981/1982, applied for a new job at regional labor offices in Germany ( $n = 1,887$ ). Thus, only "unemployed" subjects in the sense of official registration as such are included. The most important data on the physical and mental health of

the unemployed were compared with data collected by MEDIS from a random sample of employed inhabitants of Munich ( $n = 930$ ). Data on health status, including mental health, social living conditions, and so on, were gathered by a structured interview conducted by trained interviewers. The first interview took place five to six weeks after the beginning of the unemployment period; the second interview followed one year later. Thus far, only the results of the first interview are available.

*Health status indicators.* Four indicators of the health status of the interviewees were used: two global self-assessments of health status in general and chronic disability, a multi-item scale for general psychophysical complaints, and a multi-item scale for "emotional balance," based on Bradburn's [14] concept of mental well-being. The emotional-balance scale gives a picture of a person's balance of positive and negative self-perceptions and affects. Other parts of the interviews with the unemployed were concerned with the strains associated with their last job, actual psychosocial stresses, and work orientation.

*Results.* The first results of the study describe health experiences in the initial phase of unemployment. Contrary to the original expectations of the investigators, the health status of the unemployed in terms of general self-assessment was, on average, no worse than that of the controls; in subgroups such as young women, it was even better. The investigators find a possible explanation for this in the fact that a considerable proportion of the unemployed had worked at jobs that put strains on their health, so that being without those particular jobs and having unemployment benefits from social insurance may have been experienced as a relief from psychophysical stress.

On the other hand, the unemployed group scored higher on poor mental health than the employed. In particular, they expressed more anxiety about the future and suffered from feelings of restlessness and inner tension. Comparison of the emotional-balance scores of the unemployed and the employed revealed differences among subgroups. For example, in comparison with the employed, the difference in emotional-balance scores is significant for jobless men, but not for jobless women. Moreover, unemployed married women

Table 1

**Percentage Distributions of Emotional-Balance Scores by Age, Sex, and Employment Status**

Emotional balance <sup>a</sup>	Under 45 years				45 years and older			
	Men		Women		Men		Women	
	U <sup>b</sup> (N = 742)	E (N = 282)	U (N = 519)	E (N = 236)	U (N = 277)	E (N = 186)	U (N = 220)	E (N = 142)
Low	41.8	64.5	49.1	53.4	36.8	48.4	41.4	39.4
High	58.2	35.5	50.9	46.6	63.2	51.6	58.6	60.6
$\chi$	42.41		1.18		6.13		0.13	
<i>P</i>	<0.01		n.s.		<0.05		n.s.	

Source: Brinkmann & Potthoff [13. P. 387].

<sup>a</sup>High scores reflect poor mental health.

<sup>b</sup>U = unemployed; E = employed; n.s. = not significant.

exhibit better mental health than the nonmarried. For the 30% of the unemployed who report "great financial problems," mental health is, on average, worse than for the others; the same applies to the unemployed who admit that they have lost contact with friends, which indicates that there is a correlation between poor mental health and disruption of social contacts among the unemployed.

Brinkmann & Potthoff anticipate that, over the long run, poor mental health, psychosocial strain, and diminished chances of occupational reintegration will interact in lengthy or repeated periods of unemployment and will affect the unemployed workers' physical well-being. Data from the follow-up will be analyzed in the future to test these expectations.

*Conclusions.* The empirical evidence from the Brinkmann & Potthoff study, to the extent that it confirms the results of other relevant studies, suggests the following generalizations:

1. Physical and mental health should be regarded conceptually as multidimensional phenomena, and unemployment may act differently on one dimension or another.

2. In the initial phase of unemployment, mental health seems to be more vulnerable than physical health. In fact, if the lost job placed strains on the worker's health, unemployment, when accompanied by financial support such as is available under the FRG social insurance system, may bring physical and mental relief from unhealthy pressures.

3. The effect of unemployment on health seems to interact with, and be modified by, social and financial living conditions. The better the social integration of an unemployed person, the easier he or she can substitute another socially accepted role for the occupational role; and the safer the person's financial situation, the better protected he or she seems to be from the deleterious effects of unemployment on mental health.

These tentative generalizations need further confirmation in future studies. On a more theoretical level, they inspire a turn from the perspective of the individual to that of the social system in study of the influences of unemployment on health.



*The macro approach*

The question to be addressed within the framework of the aggregate-level approach to the relationship between unemployment and health is whether employment characteristics (e.g., unemployment rate) and health characteristics (e.g., rates of morbidity and mortality) of populations (generally from politically defined areas such as nations or states) are associated. The principal hypothesis underlying this approach, which is closely related to the work of M. H. Brenner [15-18], is that unemployment has deleterious effects on the health not only of those who have lost their jobs but of those who continue to work or who are not members of the labor force. It is postulated that increasing aggregate unemployment will be accompanied by

- deteriorating living conditions;
- increased likelihood of stressful individual life events such as job loss, income loss, early retirement, higher work load, work under conditions of financial and job insecurity, and, consequently,
- increased likelihood of changing habits unfavorable to health, such as drinking and smoking, and/or of further stressful events resulting from disruptions of social networks involving family and community, such as migration or divorce, and, in consequence,
- an increased probability of illness and premature mortality of the most sensitive individual members of society through spillover, anticipation, and multiplier effects.

*The "core" model.* This—very roughly summarized—concept of a highly complex system of relationships among social, psychological, and biological processes is, along the lines of a black-box approach, condensed to a statistical model, which includes in its "core" version (for extensions of the "core model," see Brenner & Mooney [19] and Brenner [20]) three main components explaining variations in indicators of a population's health status:

- (1) the long-term trend in economic growth, including or reflecting major components of socioeconomic development relevant to health (such as nutrition, sanitary conditions, or education), which is assumed to have a favorable net effect on the health status of populations;

(2) the unemployment rate as a global measure of work stress and loss of income, and of loss of social status and close personal ties for individuals and families as well, and reflecting all other consequences mentioned above and assumed to be deleterious to health;

(3) rapid economic change, which is assumed to be harmful to specific groups, for example, to those who are confronted with the rapid introduction of new technologies producing higher risks of accidents, or to those experiencing the threat of job loss or demotion in the process of industrial reorganization.

The core model, applied successfully by Brenner [15,16] to the statistical explanation of mortality rates in the United States and in England and Wales, has been adapted for the development of age- and sex-specific mortality rates (all causes of death) in the Federal Republic of Germany for the period 1950–1979 by John [21], using official data sources. The three independent variables mentioned above were made operational in terms of the linear trend of real GNP per caput, the unemployment rates, and the difference between actual and trend values of GNP per caput. Taken as a whole, the estimation results did not prove to give very much support to Brenner's findings: strong and statistically significant influences of unemployment rates on mortality rates could be detected only for infant mortality (for a detailed analysis, see John<sup>1</sup>). Apart from the possibility that the "core model" assumes a relationship between mortality and unemployment that does not really exist, at least in the FRG, there may be many other reasons why the empirical findings did not confirm the model: misspecification of the functional form of the relationship or of the time lag between economic changes and reactions of unemployment rates, no follow-up of dismissed foreign workers returning to their home countries, omission of relevant influential factors such as tobacco and alcohol consumption [19,20], or elements of the social support system, which will be referred to below.

*Unemployment and suicide.* In another study by John<sup>2</sup> the varying impact of unemployment rates on reported suicide rates in the Federal Republic of Germany (1950–1980)—again, at the aggregate level—was analyzed. This relationship has been investigated in many empirical studies, and has been largely demonstrated for the

Anglo-Saxon countries. With respect to suicide as an indicator of general mental morbidity, two points should be mentioned. First, there is no empirical evidence of a relationship between the total amount of "true" mental disorders and frequency of suicide over time in the FRG. Second, suicide does occur to some unknown extent in people who are not mentally ill; interestingly, there is a study explaining suicide mortality very well by applying an economic model of rational behavior [22].

The regression model tested for the Federal Republic of Germany is very similar to the model developed by Marshall & Hodge [23] and applied to the USA for 1933-1976. Essentially, Marshall & Hodge argue that an attempt to gauge the total impact of the economic environment on suicide should take into account (1) the state of the economy, (2) improvement or deterioration of the economy, and (3) the amount of economic change, *per se*, that has taken place. Having made these constructs operational in terms of the unemployment rate and changes in the stock market price index, it was quite possible to explain most of the variance in suicide mortality rates (a result that is not unusual for macro studies).

In the model by John, unemployment rates as indicators of the state and change of the economy were also used; moreover, alternative patterns of time lags were tested. The model was applied to the suicide rates of four different subgroups: working-age males, working-age females, male pensioners, and female pensioners. The results were, in light of the empirical evidence from other studies, contrary to expectations: a significant influence of labor market conditions on suicide mortality consistent with the underlying assumption was *not* demonstrated.

This takes us back to the propositions stated above, that the relationship between unemployment and (mental) health seems to be by no means a simple one, and that when analyzing this relationship, many possible intervening factors have to be controlled for, among them elements of the (formal and informal) social support system, the meaning of success and failure in the market place in relation to how the individual is evaluated by his social environment and how he or she evaluates himself or herself, and other, very indirect, secondary effects and repercussions. There

seems to be no simple one-way path between unemployment and health.

*Conclusions.* In the Federal Republic of Germany, unemployment has not been shown to exert an influence on total mortality, nor has an influence of unemployment on suicide mortality been demonstrated, even though, for comparison with data from studies in the Anglo-Saxon countries, similar sets of variables were used, similar models were specified, and the same procedures for testing and estimation were used. In contrast, an association has been demonstrated for infant mortality, an association that may be assumed to be a spillover effect.

### **The micro vs. the macro approach**

In analytical terms, research approaches to unemployment and mental health may at least be differentiated according to the following categories:

—disciplines, for example, epidemiological versus socioeconomic approaches—that is, differentiation into scientific fields and their specific methods and theories;

—levels: micro versus macro analyses, that is, studies may be carried out at different levels of data aggregation;

—data: collection of primary data versus secondary analysis of already existing data, that is, production versus secondary use of data as the starting point of research.

In practice these comparisons may be reduced to two combinations: on the one hand, socioeconomic secondary analysis of data at the macro level and, on the other hand, psychological/epidemiological collections of primary data at the micro level. This basic distinction indicates that the micro approach is used primarily in clinical, epidemiological, or psychological research, which investigates processes in the organism of individuals and the interaction of the individual's processes with his or her (stressful) environment; the human physical environment is investigated in terms of its effects on quality of life, health, and illness. In contrast, the macro approach deals with the opposite of health—mortality. It has issued from the social science disciplines of political science, sociology, and

Table 2

**Some Comparative (Dis-)Advantages of the Micro versus the Macro Approach to the Study of Unemployment and Mental Health**

	Macro studies	Micro studies
1. Time—chance to:		
Study long-time perspectives	More	Less
Identify past trends	More	Less
Identify future trends	Little	Little
Disaggregate time horizons	Less	More
2. Space—chance to:		
Get international data	More	Less
Produce spatially comparable data	Less	More
Disaggregate spatially	Less	More
3. Content—chance to:		
Study large populations	More	Less
Distinguish social groups	Less	More
Include rare events	More	Less
Study long-term effects	More	Less
Study indirect effects	More	Less
Operationalize own constructs	Less	More
Include subjective self-assessments	Less	More
Use available control variables	More	Less
Include new variables	Less	More
4. Data—chance to:		
Use time-series data	More	Less
Use cross-regional data	More	Less
Analyze a complete data set	More	Less
Use periodical data	More	Less
Continue data production	More	Less
Get data early	Much	Much
5. Method—chance to:		
Solve problem of self-selection	More	Less
Solve problem of inverse causation	More	Less
Solve black-box problem	Less	More
Exclude intervening variables	Less	More
Exclude Hawthorne/Heisenberg effects	More	Less
Include specific control groups	Less	More
Include specific control variables	Less	More
Use tested data collection tools	Less	More
Control data quality	Less	More
Be betrayed by ecological fallacy	More	Less
6. Results—chance to:		
Generalize results	More	Less
Have predictive power	More	Less
Infer (quasi-)causality	Less	More
Obtain face validity	Less	More
Test hypotheses	Less	More

economics; it uses primarily officially published collections of data for secondary analysis.

Obviously, both approaches have to satisfy the scientific standards of empirical research: objectivity, reliability, and validity. Table 2 summarizes the advantages and disadvantages of the two approaches.

In general, the most convincing, yet not necessarily the most conclusive, findings will be those for which there is evidence at both the micro and the macro level, that is, those for which economists, psychologists, and epidemiologists have found conforming results, complementary interpretations, and constructive suggestions for research. In this case it would be possible to substantiate associations at the macro level by referring to micro theories and to demonstrate the generalized social relevance of micro studies by referring to conforming results at the macro level.

### **A systems perspective**

The studies conducted by Brinkmann & Potthoff at the micro level and by John at the macro level have in common their finding of only relatively weak associations between unemployment and physical and mental health in the Federal Republic of Germany—in contrast to data from other countries [24]. This might be an indication of the mediating effect of structural differences among countries and political systems.

The findings yielded by Brenner's macro approach were not replicated by John for the Federal Republic of Germany, nor were they replicated by Sogaard [25] for Denmark. Does this demonstrate that Brenner's approach—even if adapted, corrected, and modified—puts us on the wrong (methodological) track? Or is it a reflection of the European countries' stronger social and family-related safeguards against economic adversity in comparison with those in the United States? To examine these questions should be the next step in both micro and macro studies. The brutal impact of unemployment on health and mental health in the United States, as documented by Brenner [15], does not seem to prevail to such an extent in Europe. If, however, for economic reasons we cut holes in our social

security networks, unemployment will probably have a more brutal effect in Europe as well.

### *Social security in the FRG*

In the Federal Republic of Germany, all employees, workers, farm workers, home workers, trainees, and apprentices, and their employers, are obliged to pay unemployment contributions into a national insurance scheme. If a person becomes unemployed, he or she may draw benefits to the amount of 40%–68% of his or her last monthly net income. Payment of these benefits is contingent upon the length of time the person has worked and paid contributions before becoming unemployed. Also depending upon the duration of his insurance coverage, the unemployed person may receive benefits for from 13 to 52 weeks; further, but reduced (35%–60% of the last net income), means-tested unemployment benefits may be drawn.

It is difficult to compare these benefits with those of other Western industrialized countries, but the conditions in the Federal Republic of Germany do not seem unfavorable in terms of income maintenance. With rising long-term unemployment, however, impoverishment is increasing markedly. At the same time, in view of the economic recession and in line with a conservative social policy, the catalogue of social security benefits (we have not listed all of them) has become subject to considerable political pressure and has been somewhat reduced. Hence, in the long run, the effect of social insurance as a buffer between unemployment, poverty, and their health impacts could be weakened.

### *Beyond unemployment*

The Brinkmann & Potthoff study, at the micro level, suggests that social support exerts at least a short-term alleviating effect on the mental health impacts of unemployment in the Federal Republic of Germany. Both levels of study—the micro and the macro—cover factors beyond unemployment. They point to the influence of institutional social support systems, which seem to be stronger in the

FRG than in the USA; but they also indicate the significance of family support systems, which, for example, make unemployment less disastrous for family-supported women than for men.<sup>3</sup>

The differences in the results of studies of the relationship between unemployment and mental health in different countries raise a number of questions and suggest a need for much more work. The social meaning of unemployment as well as its economic impact has to be considered in evaluating its influence on health; and the buffering effects of social support systems have to be taken into account. Does economic change cause damage? Can economic stability and stagnation also not cause damage? Viewed from an international perspective, is it not possible that the current European economic stagnation is at least helping the Japanese or Korean worker, whose health may be benefiting from a worldwide redistribution of resources? The question of the relationship between unemployment and mental health obviously raises further questions.

Indicators should not be taken too seriously. It is possible that focusing exclusively on unemployment prevents us from seeing the real problem, which may be the unequal distribution of work load and strains associated with unemployment. It may be equally possible that unemployment—which is not necessarily the same as inactivity—has short-term alleviating effects. To investigate such further relationships among the economy, society, and mental health should be one of the main tasks of applied health services research in the Federal Republic of Germany.

## Notes

1. J. John (1982) Economic instability and health: Infant mortality and suicide reconsidered. Paper prepared for the World Health Organization Workshop on Health Policy in Relation to Unemployment in the Community. Leeds, 13–15 December.

2. Ibid.

3. I. McAviney (1983) *Estudis sobre la relacio atur-mortalitat*. Lecture at the Institut d'Estudis de la Salut, Barcelona, 25 April.

## References

1. Hentschel, U., Möller, C., & Pintar, R. (1977) *Zur Lage der Arbeitslosen in Nordrhein-Westfalen—Eine erste Darstellung und Interpretation von Be-*



fragungsergebnissen. Köln: Schriftenreihe des Instituts zur Erforschung sozialer Chancen.

2. Büchtemann, C. F., & Rosenblatt, B. von (1981) Arbeitslose 1978: Die Situation in der Arbeitslosigkeit. *Mitteilungen aus der Arbeitsmarkt- und Berufsforschung*, 14, 22.

3. Rosenblatt, B. von, & Büchtemann, C. F. (1980) Arbeitslosigkeit und berufliche Wiedereingliederung. Erster Teilbericht über Ergebnisse einer repräsentativen Längsschnittuntersuchung bei Arbeitslosen und Abgängern aus Arbeitslosigkeit in der Bundesrepublik Deutschland 1977/78. *Mitteilungen aus der Arbeitsmarkt und Berufsforschung*, 13, 552.

4. Büchtemann, C. F., & Infratest Sozialforschung (1983) Die Bewältigung von Arbeitslosigkeit im zeitlichen Verlauf. Repräsentative Längsschnittuntersuchung bei Arbeitslosen, Abgängern aus Arbeitslosigkeit und beschäftigten Arbeitnehmern 1978-1982. *Forschungsbericht "Sozialforschung"*, 85. Bonn: Bundesminister für Arbeit und Sozialordnung.

5. Brinkmann, C. (1976) Finanzielle und psycho-soziale Belastungen während der Arbeitslosigkeit. *Mitteilungen aus der Arbeitsmarkt und Berufsforschung*, 9, 397.

6. Brinkmann, C. (1983) Health problems and psycho-social strains of unemployed. A summary of recent empirical research in the Federal Republic of Germany. In J. John, D. Schwefel, & H. Zöllner (Eds.), *Influence of economic instability on health* (Proceedings of a symposium organized by the Gesellschaft für Strahlen- und Umweltforschung, Institut für Medizinische Informatik und Systemforschung, with technical support from the World Health Organization Regional Office for Europe, München, Federal Republic of Germany, 9-11 September 1981). Berlin, Heidelberg, New York, Tokyo: Springer Verlag. Pp. 263-85.

7. Heinemann, K. (1978) *Arbeitslose Jugendliche. Ursachen und individuelle Bewältigung eines sozialen Problems—Eine empirische Untersuchung*. Neuwied: Luchterhand Verlag.

8. Heinemann, K., Röhrig, P., & Stadie, R. (1980) *Arbeitslose Frauen im Spannungsfeld von Erwerbstätigkeit und Hausfrauenrolle*. Melle: Knoth Verlag.

9. Wilhelm-Reiss, M. (1980) *Psychische Veränderungen bei Jugendlichen ohne Arbeit*. Weinheim: Beltz Verlag.

10. Mohr, G., & Frese, M. (1978) Arbeitslosigkeit und Depression. Zur Langzeit-Arbeitslosigkeit älterer Arbeiter. In A. Wacker (Ed.), *Vom Schock zum Fatalismus. Soziale und psychische Auswirkungen der Arbeitslosigkeit*. Frankfurt/Main: Campus Verlag. Pp. 179-93.

11. Frese, M. (1979) Arbeitslosigkeit, Depressivität und Kontrolle: Eine Studie mit Wiederholungsmessung. In T. Kieselbach & H. Offe (Eds.), *Arbeitslosigkeit*. Darmstadt: Dr. Dietrich Steinkopff Verlag. Pp. 222-57.

12. Fröhlich, D. (1983) Economic deprivation, work orientation and health. Conceptual ideas and some empirical findings. In J. John, D. Schwefel, & H. Zöllner (Eds.), *Influence of economic instability on health*. Berlin, Heidelberg, New York, Tokyo: Springer Verlag. Pp. 293-320.

13. Brinkmann, C., & Potthoff, P. (1983) Gesundheitliche Probleme in der Eingangsphase der Arbeitslosigkeit. *Mitteilungen aus der Arbeitsmarkt und Berufsforschung*, 16, 378.

14. Bradburn, N. M. (1969) *The structure of psychological well-being*. Chicago: Aldine.
15. Brenner, M. H. (1977) Health costs and benefits of economic policy. *International Journal of Health Services*, 7, 581.
16. Brenner, M. H. (1979) Mortality and the national economy. A review, and the experience of England and Wales, 1936-76. *Lancet*, 2, 568.
17. Brenner, M. H. (1973) *Mental illness and the economy*. Cambridge, MA: Harvard University Press.
18. Brenner, M. H. (1979) Influence of the social environment on psychopathology: The historical perspective. In J. E. Barret et al. (Eds.), *Stress and mental disorder*. New York: Raven Press.
19. Brenner, M. H., & Mooney, A. (1982) Economic change and sex-specific cardiovascular mortality in Britain 1955-1976. *Social Science & Medicine*, 17, 431.
20. Brenner, M. H. (1983) Mortality and economic instability: detailed analysis for Britain and comparative analyses for selected industrialized countries. *International Journal of Health Services*, 13, 563.
21. John, J. (1983) Economic instability and mortality in the Federal Republic of Germany. Problems of macroanalytical approach with special reference to migration. In J. John, D. Schwefel, & H. Zöllner (Eds.), *Influence of economic instability on health*. Berlin, Heidelberg, New York, Tokyo: Springer Verlag. Pp. 113-38.
22. Hammermesh, A. S., & Soss, N. M. (1974) An economic theory of suicide. *Journal of Political Economy*, 82, 83.
23. Marshall, J. R., & Hodge, R. W. (1981) Durkheim and Pierce on suicide and economic change. *Social Science Research*, 10, 101.
24. John, J., Schwefel, D., & Zöllner, H. (Eds.) (1983) *Influence of economic instability on health*. Berlin, Heidelberg, New York, Tokyo: Springer Verlag.
25. Sogaard, J. (1983) Socio-economic change and mortality—a multivariate coherence analysis of Danish time series. In J. John, D. Schwefel, & H. Zöllner (Eds.), *Influence of economic instability on health*. Berlin, Heidelberg, New York, Tokyo: Springer Verlag. Pp. 85-112.